DOCUMENT RESUME

ED 258 092 CG 018 294

AUTHOR Jones, Brent M.; And Others
TITLE Individualistic vs. Competitive Participation: The Effect on Intrinsic Motivation.
SPONS AGENCY Texas Christian Univ., Fort Worth.
PUB DATE May 85
NOTE 13p.; Paper presented at the Annual Meeting of the Midwestern Psychological Association (57th, Chicago, IL, May 2-4, 1985).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Competition; *Failure; Higher Education; *Success; Undergraduate Students
IDENTIFIERS *Intrinsic Motivation

ABSTRACT

Studies investigating intrinsic motivation and competition have supported the view that competition decreases intrinsic motivation. More recent studies suggest that the specific outcome of a competition (a win or a loss) differentially affects intrinsic motivation by highlighting the informational rather than the controlling aspect of the reward of winning. These studies showed that winning in a competitive situation increased intrinsic motivation relative to losing. To further understand the effects of competition on intrinsic motivation, a study was conducted which compared intrinsic motivation following competition with intrinsic motivation following an individualistic situation. Undergraduates (N=155) were randomly assigned to one of three groups: students who won in competition against a confederate in a puzzle-solving competition, those who lost in such competitions, and those who worked individually at solving the puzzles. All subjects were observed in a free-choice 8-minute interval after the experimenter and confederate had left the room. The measure of intrinsic motivation was the amount of time the subject played with the puzzle in a free-choice interval. The results indicated that competitive winners displayed more intrinsic motivation than did individualistic winners and winners in the individualistic situations displayed more intrinsic motivation than did competitive losers. (NRB)

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Brent M. Jones, Johnmarshall Reeve, Bradley C. Olson, & Steven G. Cole

Texas Christian University

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Running Head: INTRINSIC MOTIVATION

Paper presented at the 57th Annual Meeting of the Midwestern Psychological Association

Palmer House, Chicago, Illinois May 2-4, 1985

CG 018294

Support for this research was received from the Texas Christian University Research Fund, Grant No. 5-23757.

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Brent M. Jones, Johnmarshall Reeve, Bradley C. Olson, & Steven G. Cole

Texas Christian University

Abstract

The effects of competitive and individualistic participation with a task were compared for their effects on intrinsic motivation. Competitive participants who beat a confederate displayed significantly more intrinsic motivation than did individualistiac participants, who, in turn, displayed more intrinsic motivation than competitive participants who lost to a confederate.

Individualistic vs. Competitive Participation: The Effect on Intrinsic Motivation

A number of studies conducted by Edward Deci and his colleagues have been concerned with intrinsic motivation. In 1980, Deci and Ryan (Deci & Ryan, 1980) defined intrinsically motivated behaviors as those beha[illegible] which are prompted by the underlying need for competence and self-determination. The purpose of the present investigation was to examine how competition affects intrinsic motivation. Deci, Betley, Kahle, Abrams, and Porac (1981) proposed that competition -- the act of trying to win -- would reduce intrinsic motivation relative to competition. They hypothesized that in competition, the act of trying to win highlights the controlling aspect of the reward of winning.

To test the hypothesis that competition was controlling, Deci, et al (1981) devised two experimental conditions: competitive and noncompetitive. For the competitive condition, two individuals were induced to compete via instructions to try to beat the other person in a puzzle-solving contest. One of the individuals in each trial was an experimental confederate who had previously been instructed to lose the competition. On the other hand, the pair in the noncompetitive condition were instructed only to do the best they could in solving the puzzles. In this condition, the confederate also allowed the naive subject to solve the puzzle first. The results of the study did indeed support the Deci hypothesis that competition

decreases intrinsic motivation relative to competition.

Recently however, Reeve, Olson, and Cole at Texas Christian University (1985) performed studies which suggest that the specific outcome of a competition (i.e., a win or a loss) differentially affects intrinsic motivation by highlighting the informational, as opposed to the controlling, aspect of the reward of winning. Specifically, the Reeve group found that winning in a competitive situation increases intrinsic motivation relative to losing.

In these studies, both winners and losers were instructed to try to beat the opponent. Therefore, the controlling aspect of competition was held constant and the informational aspect became salient. When the informational aspect is salient, either competence or incompetence feedback is available to the individual. When competence feedback (i.e., winning) is received, intrinsic motivation increases relative to when incompetence feedback, or losing, is received. The two perspectives are illustrated in Figure 1.

To further understand the effects of competition on intrinsic motivation, our group compared intrinsic motivation following competition with intrinsic motivation following an individualistic situation. In the latter condition, only one person works at the task and receives equivocal feedback. Thus, the present study compares the effects of individualistic and competitive participation on

intrinsic motivation. If the Deci, et al (1981) group is correct in their assumption that competition decreases intrinsic motivation relative to no competition, and if the decrease in intrinsic motivation follows from the fact that the informational aspect is not salient when the controlling aspect is salient, then persons in the individualistic situation should show no less intrinsic motivation than persons in competition, regardless of their competitive outcome. If, on the other hand, Reeve, et al (1985) are correct, then winners should show the highest level of intrinsic motivation while losers should show the least intrinsic motivation. Moreover, those persons in the individualistic situation should show intrinsic motivation which is lower than that for winners, but higher than that for losers.

Method

Participants were 155 undergraduate students (81 females and 74 males) at Texas Christian University. Contestants were randomly assigned into one of three groups: students who won in competiton, those who lost in competition, and those who worked individualistically.

For the competitive condition, subjects were informed that the present experiment involved puzzle-solving in a

competitive environment and that the object of the task was to complete the solutions of the puzzle before the other person. The confederate either won or lost three competitive trials. When the confederate won, he or she found each solution within a minute; when the confederate lost, solutions were not completed for any of the three puzzles, and the naive subject was allowed to win.

Participation in the individualistic situation was identical to the competitive conditions except that the lone subject was informed that the object of the task was to do the best that they could at solving the puzzles.

In all three conditions, the subject was surreptitiously observed in a free-choice 8 minute interval after the experimeter and confederate had left the room, presumably for an interview.

Results and Discussion

The measure of intrinsic motivation was the amount of time the participant played with the puzzle in the free-choice interval, within a range of 480 possible seconds. Means and standard deviations for each condition by gender are presented in Table I.

Planned comparisons on the data showed that, as predicted, competitive winners showed more intrinsic

motivation than did individualistics and individualistics showed more intrinsic motivation than did competitive losers. Significance was at the .04 level.

The pattern of means of the three experimental conditions was also tested. A test for linear trends among the conditions was significant at the .001 level. Thus, the competitive winners exhibited the greatest amount of intrinsic motivation, the competitive losers the least, and the individualistic participants were intermediate.

The results of the present study not only supported the hypothesis that winners receive informational competence feedback and losers receive informational incompetence feedback, but took a further step in examining the effects of competition on intrinsic motivation. If, in individualistic situations it is assmed that individuals' feedback is either ambiguous, equivocal, or uninterpretable, then their intrinsic motivation measures should fall between that for individuals who receive competence feedback, and individuals who receive incompetence feedback. The results of the present study supported this hypothesis in that winners showed more intrinsic motivation than individualistics who, in turn, showed more intrinsic motivation than losers.

So the present study did not support the Deci, et al (1981) assumption that competition decreases intrinsic

motivation relative to no competition. Moreover, and in conjunction with the Reeve, et al (1985) study, it rejects the proposition that in a competitive situation the controlling aspect is salient and dominates over the informational aspect.

Figure 1

Two Perspectives on the Effect of Competition on Intrinsic Motivation

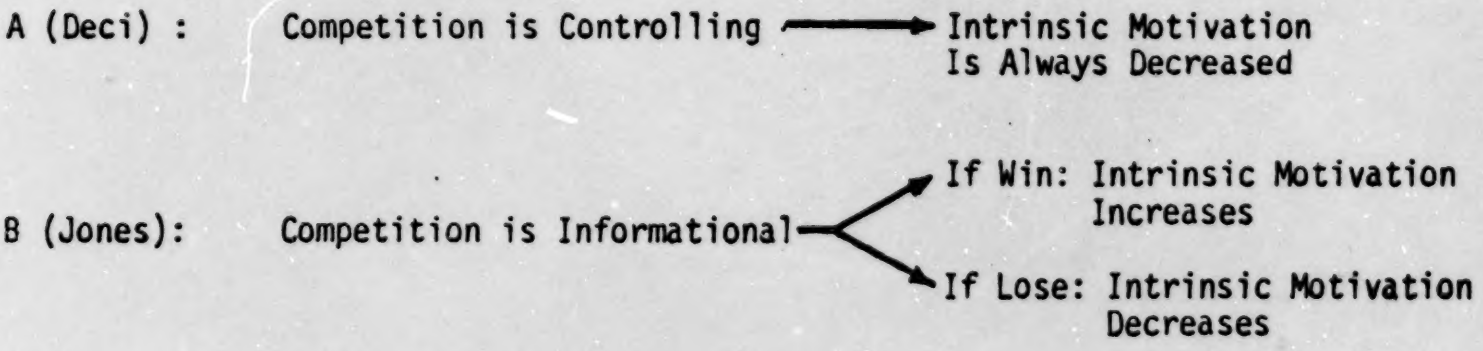

Table 1

Means and Standard Deviations of Puzzle-Playing Time in Seconds for Experimental Condition by Gender

CONDITION	GENDER	
	FEMALES	MALES
WINNERS		
Mean	214.8	255.8
Standard Deviation	(192.9)	(166.5)
N	22	26
INDIVIDUALISTICS		
Mean	182.8	167.7
Standard Deviation	(181.9)	(164.1)
N	29	31
LOSERS		
Mean	105.2	92.9
Standard Deviation	(140.1)	(156.3)
N	26	21

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